



# Fiber Laser Oscillator Core Module



## Product Overview

Micro-optic package containing core components for a mode-locked laser

BATOP GmbH  
Stockholmer Str. 14  
07747 Jena  
Germany  
Phone: +49 3641 634009 - 0  
URL: <http://www.batop.de>  
e-mail: [info@batop.de](mailto:info@batop.de)

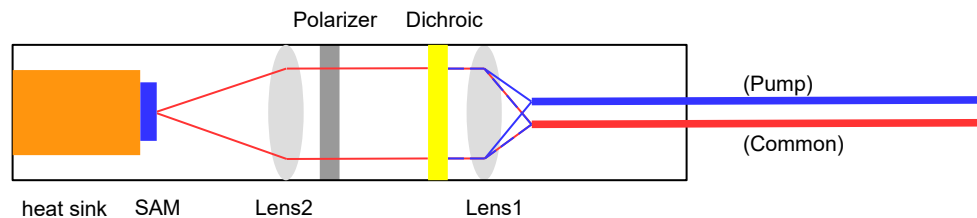
### Main package components:

- fiber coupled Saturable Absorber Mirror **SAM**<sup>™</sup>
- Lens pair to optimize SAM performance

### Optional components:

- Polarizer
- Dichroic mirror to protect the SAM from residual pump light
- Additional port for pump light / WDM
- Active polarization maintaining fiber

### Example design



### FMSPW-1560-P1480-SM15PSU25-FC/APC

Design wavelength ( $\lambda$ ): 1560 nm  
 Modulation depth ( $\Delta R$ ):  $9 \pm 3 \%$   
 Relaxation time ( $\tau$ ):  $3 \pm 2$  ps  
 Saturation energy ( $E_{sat}$ ):  $80 \pm 25$  pJ  
 WDM pass band: 1535 nm – 1570 nm  
 WDM reflect band: 1470 nm – 1490 nm  
 Fiber on common port:  $35 \pm 2$  cm SM15-PS-U25D  
 Fiber on pump port:  $80 \pm 2$  cm SM15-PS-U25D  
 Connectors: FC/APC



Package dimensions:  
50 mm x 13 mm x 8 mm

### FMSPW-1560-P1480-PMESF7- FC/APC

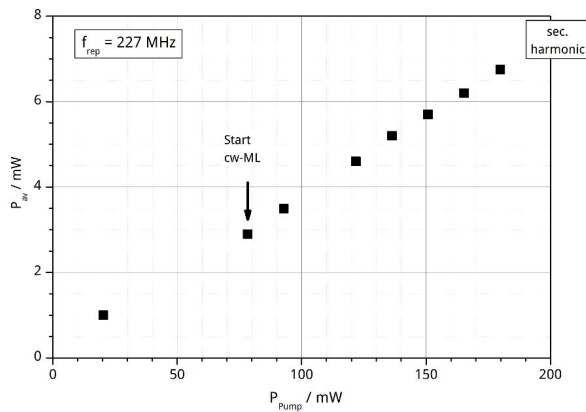
Design wavelength ( $\lambda$ ): 1560 nm  
 Modulation depth ( $\Delta R$ ):  $9 \pm 3 \%$   
 Relaxation time ( $\tau$ ):  $3 \pm 2$  ps  
 Saturation energy ( $E_{sat}$ ):  $80 \pm 25$  pJ  
 WDM pass band: 1535 nm – 1570 nm  
 WDM reflect band: 1470 nm – 1490 nm  
 Fiber on common port:  $22 \pm 2$  cm PM-ESF-7/125  
 Fiber on pump port:  $80 \pm 2$  cm SM15-PS-U25D  
 Connectors: FC/APC



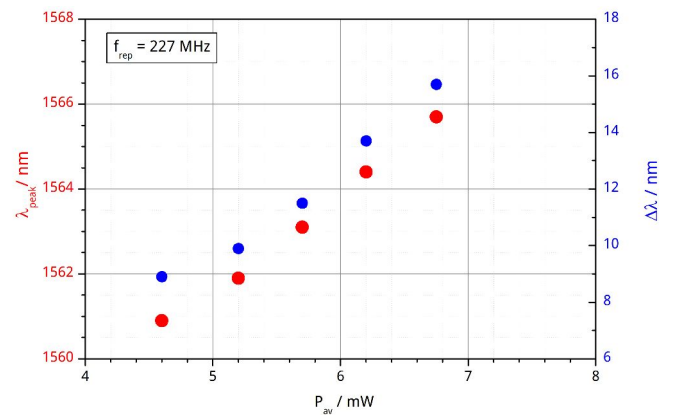
Package dimensions:  
50 mm x 13 mm x 8 mm

**Micro-optic packages for other wavelengths, e.g., 1030 nm and 1064 nm are also available**

Typical performance of a MLL containing a **FMSPW-1560-P1480-SM15PSU25** and a **FBM-1560-PMESF7-PC-23-0.9**



Laser output power vs. pump power



Laser output bandwidth and centre wavelength vs. output power

Notes: